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BREAKING THE PARADIGM: THE CHALLENGE OF CLOSE AIR SUPPORT IN
THE FUTURE JOINT OPERATING ENVIRONMENT

by

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A paper submitted to the Faculty of the Joint Advanced Warfighting School in partial satisfaction of the requirements of a Master of Science Degree in Joint Campaign Planning and Strategy.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Joint Forces Staff College or the Department of Defense.

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13 May 05

ABSTRACT

In this time of transformation, the U.S. military faces many uncertainties. Its current enemies are elusive and a near peer competitor is non-existent. One certainty for the military however, is it will continue to deploy expeditionary forces to regions around the globe to support U.S. national interests. These continued deployments have forced the Army to become a lighter and more deployable expeditionary force. The future Army brigade unit of action will depend upon more joint capabilities to provide a greater amount of support. The Army's increase joint interdependency will require the Air Force to be more prepared than ever to provide CAS. Based upon Air Force history there is a danger the Army's increased reliance on joint capabilities will go unanswered if the Air Force fails to prepare sufficiently.

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CHAPTER 1

INTRODUCTION

The United States Army first had an airplane capable of providing close air support (CAS) to ground forces in 1911. It was in that year the first two way radio was used in, and the first bomb dropped from an aircraft (Gabriel et al, 1992). The airplane provided the United States Army with a revolutionary military capability. Since the time this airplane was bought from the Wright brothers, the military forces of the United States have struggled over the employment of them to support ground forces in combat. On one hand, there are those who argue, that close air support should be a primary mission of the Air Force. On the other hand, there are those who argue that the precious air assets are better used for strategic and operational interdiction missions far from the ground war. This argument has been hotly contested since the first air-to-air engagements of World War I. Fighter pilots discovered the art of aerial combat and some, such as Baron Manfred von Richthofen (The Red Baron), became legends for their daring and skill in such engagements. When the airplanes ability to attack ground forces was discovered, close air support (CAS), pilots were less willing to perform this air to ground mission because it lacked the élan of air-to-air combat. After all, legends like Eddie Rickenbacker, America's leading ace in WWI, were made infamous by the number of German aircraft shot down in aerial combat, not the number of soldiers killed on the ground.

Since WWII, the Army and the Air Force have been in a continuous battle for priority of CAS. The Army commanders believe the Air Force has neglected the role of CAS and delegated it to a lower priority behind air superiority and strategic bombing. The Air Force believes air power can be more decisive in a campaign by attacking targets with greater strategic value than

those deemed important by the ground commander. Support for conducting CAS in the Air Force appears to develop only during conflicts when soldiers are dying. Between the conflicts, emphasis tends to shift back to developing aircraft more capable of conducting air-to-air combat and destroying the strategic targets. CAS needs to be a priority during this transformation process in order to ensure a seamless execution of the joint forces capabilities.

The future joint operating environment demands joint interdependence of CAS and ground forces. The Department of Defense as a whole is moving towards Joint and Expeditionary capabilities that will routinely be employed in remote, austere locations. Ground forces will be employed in smaller size units as their capabilities improve. Due to the expeditionary nature of their deployments and constrained strategic lift, ground forces will depend on CAS for success in combat. In anticipation of the change mandated by the future joint operating environment, it is essential that the Air Force change how they manage the CAS mission.

Thesis Statement

The Air Force has traditionally been led by officers from the fighter and bomber community. These leaders have brought a parochial view to their positions, which emphasize the importance of fighters and bombers over platforms that conduct CAS. As the Department of Defense continues to transform, it will rely heavily upon the services to provide joint capabilities. The thesis of this paper is that, based upon Air Force history, there is a danger the Army's brigade unit of action increased dependency on joint capabilities will go unanswered.

The issue of CAS is important to the Air Force and the Army, as well as, to all the joint forces combatant commanders who rely upon the services to provide the capabilities required to accomplish their campaign plans. As the services prepare to operate in the future Joint Operating Environment, the Army will place greater emphasis on joint interdependencies and will rely on

the Air Force to provide CAS to the ground commanders. If the Air Force fails to prepare sufficiently for the increased CAS role, then the ground forces will be incapable of fulfilling their mission assigned by the joint forces commander. A perfect example of this liability occurred during Operation Restore Hope in Somalia. In this operation, a lightly armed ground force was employed with no CAS support. The outcome was heavy casualties and a termination of the operation before the political and military objectives of capturing the ruling warlords were met. In this era of joint operations and combined arms, the Air Force needs to become more aggressive in its ability to provide the Army with a decisive CAS capability.

To demonstrate the Air Force's need to spend greater time, money and training on this joint capability, a review of historical references, service transformation plans and current emphasis on CAS is required. The historical references will include a review of CAS from WWII to Vietnam, the development of the A-10, CAS operations in Operation Restore Hope, and Operation Enduring Freedom. A review of service transformation plans includes those of both the Army and the Air Force. Finally, a review of what the joint forces are currently doing to incorporate CAS in their training efforts and recommendations on how to prepare for the effective use of CAS in the future joint operating environment.

CHAPTER 2

HISTORICAL PRECEDENCE

It is important to understand the lessons history attempts to teach prior to understanding what the future holds. The history of joint CAS can be traced back to the development of aerial warfare in WWI. Highlights of this history are primarily centered during times of conflict. WWII, Korea, Vietnam and recent operations in the global war on terror all offer similar lessons in history when it comes to CAS. The salient points of these lessons are CAS is difficult to coordinate, it requires training to be proficient, and it needs to be responsive to be effective. These lessons are typically learned at the cost of human lives. In order to understand the implications of future CAS operations in a joint environment it is important to understand the history of the paradigm that exists today.

This chapter is a review of the history of CAS beginning with the first real conflict between ground and air commanders on the control of CAS assets in WWII. A summary of CAS in Korea reveals how the Air Force's early failures to provide reliable CAS was due to a focus on nuclear deterrence more than a willingness to employ jointly. As a result of lessons re-learned in Vietnam, the Air Force developed the A-10 Thunderbolt II to provide a dedicated joint CAS capability. The history of the development and subsequent attempts to eliminate the A-10 is accomplished to demonstrate the emphasis placed on CAS by the Air Force. Two recent examples operations conducted by lightly armed ground forces are included to demonstrate how

the lack of proper CAS support influences operations. Operation Restore Hope in Somalia and Operation Anaconda in Afghanistan are both discussed in detail.

Close Air Support in WW II

It is important to study the history of CAS in to WWII. It is during this struggle that two very important issues effecting CAS today were developed. The first was how air power was controlled and allocated in support of the ground forces. The second issue was the priority CAS was given by air commanders. The priorities of employing air power were, and still are, to gain and maintain air superiority, air interdiction, and CAS. To understand how these two important issues, control of airpower and priority of CAS, effect the execution of joint CAS today, it is necessary to explore their roots.

The doctrine of CAS was formulated prior to the outbreak of WWII but it was not until American forces were fighting in the North African campaign that it began to mature. At the start of the Allies' North African campaign the American air assets, most notably the fighter aircraft, were under direct control of the Army ground commander. The Army's document controlling the relationship between the Army and the Army Air Force at the time was Field Manual 31-35 and it stated that specific units within a task force could directly control aviation units (Mortensen, 1987). In other words, brigade or division commanders could control air units. Controlling air units meant ground commanders chose to keep aircraft constantly overhead to strike targets immediately in front of the ground forces. In addition to air to ground strikes, the fighters provided protection from German air attacks. The problem with this type of control was

that German airfields were not heavily attacked and therefore the German Luftwaffe continued to attack Allied ground forces. Air superiority was not achieved.

The lack of superiority would play a critical role in the American defeat at Kasserine Pass. The battle occurred as the Americans attacked the German's from the west of Tunisia, the British attacked from the east. With these two forces cornering the remaining German forces in Tunisia, the German commanders sought to buy time for the withdrawal by attacking the Americans. On 20 February 1943, the Germans attacked the American lines at Kasserine Pass, using coordinated air and land forces. The attack drove the American force back and caused heavy losses, nearly 1,000 soldiers killed. The defeat caused the American commanders to re-evaluate their situation.

Following the American defeat, the Allied command was reorganized. British Air Vice Marshall, Sir Arthur Coningham, was given command of the centralized Allied Air Support Command (Mortensen, 1987). Coningham was the air commander who worked closely with the British ground commander, General Montgomery, as they drove the German Army from Egypt back through Libya and into Tunisia. Coningham succeeded in western North Africa against the Germans because he centrally controlled airpower and achieved air superiority prior to supporting the ground commander. He convinced the Allied commander, General Eisenhower, that air assets needed to be centrally controlled. He also convinced General Eisenhower that the first priority of airpower was to achieve air superiority (Mortensen, 1987). Once achieved, air superiority allowed the flexibility to conduct air interdiction and CAS sorties in support of the ground forces. This allowed the ground commander a greater degree of freedom of maneuver during the remaining campaign.

The results of the North African Campaign changed joint interdependencies for good. Following the victory in North Africa, in July of 1943, the Army Field Manual 100-20,

Command and Employment of Airpower was published (Mortensen, 1987). It incorporated the lessons of centralized control of airpower and the importance achieving air superiority. For the first time air commanders were given control of airpower on a coequal status with the ground commanders. It also stated air superiority was the tactical Air Force's first priority. These changes in command and operational employment of airpower remain in Air Force doctrine today. Air Force Doctrine Document 1 (AFDD) lists centralized control and decentralized execution as a tenet of air and space power. It also lists counter air missions (air superiority) above counter-land (CAS included) missions (USAF, 2003).

This doctrine focuses the Air Force on priorities other than CAS. The priority of CAS has, at best been the third priority behind air superiority and air interdiction. This has been true especially during times of peace when budgets have constrained capabilities and training opportunities. The future ground forces envisioned by the Army will require a greater reliance on joint capabilities, one of which is CAS. Continuing to place such a low priority on CAS will jeopardize the ability of the Air Force to effectively provide that capability.

CAS in the Korean War

The Korean War provides a good example of the break down of joint interdependencies when it comes to CAS. The Air Force was not prepared for the war on the Korean peninsula when the North Koreans invaded South Korea and even less prepared to perform joint CAS. The focus of the Air Force was on deterring the Soviets in Europe with the threat of nuclear weapons not protecting the South Koreans from an invasion from the north. As a result, most of their training was preparing for nuclear war not a conventional fight.

The Air Force, created by the national security act of 1947, had the primary responsibility for conducting a nuclear attack with its strategic bombers. Its fighter aircraft also had the task of defending against Soviet bombers. Training for an all out nuclear war took precedence over nearly all other tasks. The task of conducting CAS for the Far East command, the command that included Korea and Japan, prior to the war, was listed as the eleventh of twenty-six priorities (Stover, 2001). Tactical aircraft stationed in Japan concentrated their training efforts on air-to-air combat and not on air to ground bombing. Ironically most senior military leaders believed that if war were to come in Korea, overwhelming airpower would sweep the communists armies from the peninsula (Stover, 2001).

The Marine Corps, on the other hand, was fighting for its very existence during the brief period of peace between 1945 and 1950. The Army believed it should be the only ground force and the newly created Air Force thought it should have control of all aviation. Leadership in the Marine Corps was doing everything they could to make the Marines relevant. They believed that following a nuclear war with the Soviets, the Marine's expeditionary task forces aboard ships at sea were more survivable than were the stationary armies of Europe (Stover, 2001). This thinking focused the Marines to train to their specialty of a light amphibious force supported by naval gunfire and tactical aviation from the Navy, Marines Corps, and Air Force. Unlike the other service's tactical aviation, Marine aviation existed primarily for providing CAS to their ground forces.

At the outbreak of war in Korea, ground forces certainly needed CAS. The Eighth Army forces retreated to the defensive perimeter around the southern port city of Pusan. The defensive perimeter held by South Korean and U.S. forces early in the war, did not have adequate artillery support for the first three months of the battle and relied on airpower to make up the difference

(Stover, 2001). Army ground commanders criticized the Air Force for providing inadequate CAS to their forces as they moved south into the perimeter. The Air Force followed the priorities developed in Europe and North Africa in WWII, air superiority, strategic attack, interdiction of enemy lines of communication, and then CAS (Stover, 2001). Unfortunately, the Air Force found itself quickly out of strategic targets because most were quickly destroyed or were off limits to bombing based on their proximity to the Chinese border. Air supremacy was never much of a factor over American ground forces because the North Korean and Chinese fighters flew out of bases in China and did not stray too far south. That left interdiction and CAS as the remaining priorities for the Air Force. To make matters worse, most of the tactical aircraft used in support of the ground forces were fast moving jet aircraft not designed to perform the air to ground mission (Campbell, 2003). These fast moving tactical aircraft combined with a lack of air to ground training certainly did not give the Air Force the joint capability it so desperately needed at the outbreak of the war. The Air Force was not adequately prepared to provide an effective CAS capability.

Marine aviation however, was well prepared to provide close air support for their ground forces from the start of the war. The lightly armored Marine forces carried little artillery and often deployed out of range of naval gunfire. This required them to rely primarily on Marine airpower to provide CAS. The Marines relied so heavily on their organic aviation support its leaders were reluctant to let the Air Force assist in providing CAS. Major General Edward Craig, the Commander of the 1st Provisional Marine Brigade, convinced General Douglas MacArthur, Commander of the United Nations Operations in Korea, to allow Marine fighters to support only Marines in combat (Stover, 2001). General Craig felt his Marines had trained together and would get better results than if he used Air Force CAS (Stover, 2001).

Unfortunately, for the Army, there were not enough Marine aviation assets to provide CAS for Marines and Army units. The Air Force, who held the requirement to support the Army, had not properly trained for CAS prior to the war because its focus was on deterring nuclear war with the Soviets.

It is evident from the examples that the Air Force was still not making CAS a very high priority. The lack of joint integration prior to the war left the Air Force unprepared for the important role of providing CAS in Korea. The Air Force had effective doctrine but failed to adjust priorities as conditions changed. The Air Force's focus on nuclear war and subsequent low priority on CAS training led to an early failure to provide the joint force commander with the required capability. The expeditionary force sent to Korea consisted of lightly armored forces that were short on artillery support; the Air Force commander should have realized that CAS was going to be a priority.

Task Force Smith, the first American unit to fight in Korea, is an excellent example of this lack of preparedness. The task force, comprised two companies of 406 soldiers, deployed from occupation duty in Japan to Korea just days after the North Koreans attacked. General MacArthur sent the task force to slow the North Korean *armored* advance in order to buy time for the remaining elements of the 24th Division to prepare a defense further south. The task force heavy weapons included six mortars, six 105mm Howitzers canons, four recoilless rifles and a handful of outdated rocket launched anti tank weapons (Fukumitsu, 1996). The task force did not have CAS available because earlier cases of fratricide on U.N. troops caused commanders to impose a restriction on CAS. Aircraft could not drop bombs south of Suwon, a town north of the task force's position, (Spencer). It seemed the lack of training for CAS contributed to pilots bombing friendly troops. The restriction left the task force woefully unprepared to accomplish

its mission. When the North Koreans attacked, Task Force Smith lost nearly 40% of its force in a matter of hours and failed to significantly slow the advance of the North Korean armored column (Fukumitsu, 1996). Undoubtedly, effective CAS could have helped the task force achieve its mission of slowing the North Korean column.

The failure of the Air Force to prepare for CAS prior to the Korea War is significant. It demonstrates a history of unwillingness by the Air Force to make CAS a high priority mission. The resulting lack of priority left the Army without the CAS it needed in a very difficult initial fight with the North Koreans. The rapid deployment of light infantry units, such as Task Force Smith, required the joint capability of CAS for success. The Army is currently reorganizing to become an expeditionary force capable of deploying to crises like they did in 1950 to Korea. The success of any expeditionary force depends on critical joint capabilities, especially CAS. The Air Force cannot afford to make the same mistake again.

The A-10 Warthog

At the outbreak of the Vietnam War, the Air Force was again unprepared for its role as provider of CAS for the Army. Following Korea, the Air Force had continued to concentrate its efforts to build strategic bombers capable of attacking the Soviets, as well as fighters capable of intercepting Soviet bombers. When it was evident to the Army and Congress that the Air Force was unprepared for CAS in Vietnam, they placed tremendous pressure on the Air Force to produce a more effective joint CAS capability (Campbell, 2003). The time had come for the Air Force to realize containing communism was going to take more than just deterring aggression with nuclear weapons. If the Soviets were willing to defer an all out war with the United States and

continue to fight through proxy wars the Air Force would have to be better prepared to support the ground war.

Over a period of two decades, the military had fought two very distinctly different wars. Korea was one of fighting very visible, massive waves of Chinese forces. Vietnam was one of fighting shadowy insurgents in the countryside. They did have two important things in common, a lack of enemy air threat to U.S. ground forces and a large demand for CAS. The demand for CAS created a demand for a specific type of aircraft to conduct the mission. The aircraft needed to fly slow enough to find targets, stay over the target area for an extended amount of time, be rugged enough to survive damage from ground fire, and carry enough munitions to be effective once over the battlefield. In Korea and Vietnam, the most capable CAS aircraft had proven to be older propeller driven aircraft. In Korea, it was the Marines in their aging Corsairs and in Vietnam, it was the Air Force's A-1E, a WWII era aircraft borrowed from the Navy to bridge the CAS gap (U.S. Air Force). After two proxy wars with the Soviet Union it was evident there needed to be a dedicated aircraft to conduct the CAS mission. The Army would require a significant CAS capability and the Air Force could not rely upon WWII aircraft or supersonic fighters to provide it. A new aircraft was required to fill the gap.

The Army took the challenge of CAS into its own hands near the end of Vietnam, where the concept of attack helicopters was created. The Army sought to fill its need by developing an attack helicopter that rivaled the capabilities of fixed wing attack aircraft, the AH-56 Cheyenne. The Cheyenne, was for its time, the most capable helicopter ever built. It was rugged, fast (for a helicopter), and packed a powerful punch with anti-tank rockets, a grenade launcher and a 30mm cannon. Unfortunately for the Army, the Cheyenne ran into developmental problems and cost overruns which led Congress to cancel it in 1972 (Pike).

Threatened with the possibility of losing a mission and the subsequent funding to the Army's new attack helicopter concept, the Air Force finally got serious about developing a CAS aircraft. In 1970, competition for the development of a dedicated CAS aircraft began. In 1973, the Air Force selected the A-10 Thunderbolt II as the CAS platform (Campbell, 2003). The appearance of the A-10 should have brought about an awakening to the fighter and bomber pilots running the Air Force that the CAS mission was a vital mission. Instead, critics quickly attacked the A-10 by saying the Air Force could not afford to buy an aircraft dedicated to a single mission. There was also concern over the aircraft's apparent vulnerability to ground fire due to its slow speed. The only thing that saved the aircraft from cancellation before production even started was the continued demand for CAS in Vietnam (Campbell 2003).

As time went on and the A-10 integrated into the Air Force, there were continued attempts to remove it from service. During the 1980's the Air Force leadership tried to end the life of the A-10. The aircraft was seen as un-survivable in the European battlefield, unable to perform its mission at night and too "low tech" to integrate into the force being built during the Reagan build up. In an epic battle between the A-10 and the F-16, the Air Force seemed to be prepared to toss away all it had learned in the past about CAS and the need for a dedicated CAS aircraft. The Air Force wanted to phase out the ugly and aging A-10 for the new super sonic, multi-role fighter, the F-16. In his book "The Warthog" Douglas Campbell writes:

"To these opponents, it seemed that the Air Force F-16 decision on CAS defied the historical lessons of combat CAS experience, which dictated a design such as the A-10. The critics of the F-16 CAS idea maintained that in spite of Air Land Battle's emphasis upon individual units prevailing in free-style combat, Army troops still wanted maximum available firepower applied against the enemy facing them. Fredericksen's Army officer contact seemed

uncertain about the Air Force plan. Thus, the opponents saw the F-16 CAS plane gambit as at best a shortcut purchase and at worst, *yet another example of air leaders' traditional neglect of CAS.*" (emphasis added).

The debate about removing the A-10 from service continued throughout most of the decade. When the U.S. went to war with Iraq in 1991, the A-10 performed well in combat, improving its value in the eyes of Air Force leadership. Although it was used for interdiction missions at the start of the air phase of the war it quickly shifted to the CAS role when the ground war began. One A-10 flight was credited with destroying 23 armored vehicles on one mission (Campbell, 2003). Iraqi soldiers who later became prisoners commented they feared the A-10 more than any other coalition aircraft because it has always loitered over the battlespace and accurately destroyed whatever it engaged (Campbell, 2003). The performance of the aircraft was superb enough to change the minds of some Air Force leaders. During the war Air Force General Horner, the Joint Force Air Component Commander, was impressed enough with the planes performance to say, "I take back all the bad things I have ever said about the A-10. I love them! They're saving our asses." (Campbell 2003). Clearly, there still existed a need for a dedicated CAS aircraft. The A-10's performance in the war proved it was capable in fulfilling that need.

The need for a dedicated CAS aircraft was quickly forgotten in the post Gulf War era as the U.S. began a draw down from the Cold War. Even General Horner, who had spoken so highly of the A-10 in the gulf war, was quick to place it once again on the chopping block. Following the war he said he had "'great admiration for the A-10, [and] the job it did,'" but he added that "it must be retired as it became old'" (Campbell 2003). The evident success of the A-10 in combat appeared to be overshadowed by the bigger success story of airpower decimating the Iraqi forces. It can be said air power advocates saw the success of the air campaign against Iraq as

proof that air power had finally achieved its potential single handedly winning the war. This success subsequently falsely reduced perception of the important role of ground forces and the importance of conducting CAS with a dedicated aircraft such as the A-10.

This resulted in a drawdown of A-10 numbers following the war with Iraq. Although its numbers are smaller, it remains an important part of the joint commander's arsenal. During Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF), it provided effective CAS support to the joint force. Even though it continues to this day to receive updates in avionics and targeting systems to increase its lethality the A-10 days are numbered. The Air Force plans to replace the A-10 with the *multi purpose* F-35A and F-35B in the next 10 to 15 years (U.S. Air Force, 2005). When this happens there will be no dedicated aircraft designed to conduct CAS. The F-35B is being touted as a CAS platform simply because it can take off and land vertically like the Marine Corps' primary CAS aircraft the AV-8 Harrier. What remains to be seen is how the squadrons of F-35B will be trained. Will their training be concentrated on the CAS mission or will the temptation to train in multi-missions be too much to resist?

The importance of this section on the A-10 is to demonstrate the varying degree of commitment the Air Force provides to joint CAS. It is also imperative to understand the importance of a dedicated aircraft to provide CAS. For future joint operational forces to be successful CAS must have a vital role. With the F-35A/B aircraft designated to replace the A-10, the Air Force risks repeating its history of trying to fill the CAS void with a multi-purpose aircraft. The danger of this is that the pilots of these new aircraft will not train sufficiently for CAS and the Air Force will once again be unprepared to provide CAS to the joint forces. This danger increases when combined with the increasing need for CAS due to the Army's greater emphasis on an expeditionary force.

Operation Restore Hope

An early example of this expeditionary type force is Operation Restore Hope. The end of the Cold War left the United States as the sole super power on the globe. With no clear adversary on the horizon, the Department of Defense (DoD) began to search for a new way to define itself and the mission it would accomplish. Military power was used to solve more than just military problems around the globe. These new missions forced the military to deploy more often. As a result, the military began to transform into an expeditionary force ready to deploy rapidly around the globe. For both political and speed of deployment considerations, this new type of force was required to be lightly armored and supported by a small amount of artillery. Subsequently, they became more vulnerable to attack. This in turn required them to be supported by other means such as CAS. One of the early examples of this new type of mission was Operation Restore Hope in Somalia.

Operation Restore Hope is an excellent example of the kind of operations the U.S. would be facing in the coming years with respect to the troop strengths and mission type. The U.S. forces, fresh off a stunning victory in Iraq, were not prepared to operate jointly in a military operation other than war (MOOTW) environment. The success achieved in the Gulf War most certainly influenced the decision makers to send in the troops and ultimately fail to adequately support them with the firepower they needed.

The first Bush Administration decided what was happening in Somalia was unacceptable and took the opportunity to use its military power in a humanitarian role to help save starving Somalis. U.S. forces were sent in to provide security to the humanitarian organizations who

were distributing food to the starving population in the southern half of Somalia. The initial force, designated United Task Force (UNITAF) was a relatively large force, containing 37,000 military personnel, 28,000 of which were U.S. personnel (Brune, 1998). Ten thousand soldiers from the Army's 10th Mountain Division made up the bulk of these troops. These troops were supported by an Army aviation brigade and division artillery. Under UNITAF security and supervision, the humanitarian assistance began to flow again. The success was contributed to both the diplomatic effort that preceded the introduction of ground forces and the fact the security forces arrived with overwhelming firepower that "over-awed the poorly armed Somali militia" (Brune 1998).

As the United Nations (UN) began to assume responsibility for operations in May of 1993, the United States withdrew most of its forces including the heavy armor and fire support that the Somali warlords feared the most. The UN forces quickly became targets of Somali warlord Mohammad Farrah Aideed and his militia. After Aideed forces killed 24 Pakistani peacekeepers, the UN decided to remove Aideed from a position of influence. The US responded by sending 4 Air Force AC-130 gun ships to Mogadishu to provide CAS to the troops on the ground (U.S. Army). The AC-130 aircraft participated in several operations providing fire support to ground forces as they sought to punish Aideed's forces for the attacks on UN forces. The AC-130 had a direct impact on the operations against militia. It stuck fear into Aideed which caused him to go into hiding and loose a "significant amount of his arms" and control of operations (Sangvic, 1998).

Unfortunately, when the images of the damage they caused were shown on television these aircraft were quickly withdrawn. General Powell was quoted as saying, "They wrecked a few buildings and it wasn't the greatest imagery on CNN," (U.S. Army, n.d.). The ground

commanders were left to perform a mission without the required support because the political leadership was afraid of how the images of the resulting military action would appear on the news. The lack of firepower to support left the ground forces vulnerable to attack from Aideed's forces. To help improve the chances of capturing Aideed without committing ground forces with no air cover, the UN commander, Turkish Lieutenant General Bir, decided to offer a \$25,000 reward for information leading the capture of Aideed (Sangvic, 1998). This action, combined with the psychological and military effects of the AC-130s now removed caused a stalemate. The United Nations Operations Somalia (UNOSOM) forces had lost the initiative and simply waited for the reward to work (Sangvic, 1998).

In an attempt to break the "stalemate," the U.S. deployed Task Force Ranger. This force contained a small contingent of Rangers, special operators, and supporting helicopters, to capture Aideed at the request of the UN. Sent to operate in areas controlled by heavily armed militia, Task Force Ranger lacked the support of joint CAS assets. Its only fire support came from Army MH-60 Blackhawk transport and AH-6J Little Bird light attack helicopters (Day, 1997). It had no dedicated helicopter gunships, such as the Army's Apache or fixed wing CAS aircraft, like the Air Force AC-130 previously deployed. This lack of support would leave Task Force Ranger with little advantage over the heavily armed militia.

To his credit, the ground commander of US forces under the UN command, Major General Montgomery requested more firepower in the form of AC-130s and Army M-1 tanks. The Somalia operation continued through the change of presidential administrations. In January 1993, Bill Clinton became the Commander and Chief of U.S. forces. His Secretary of Defense, Les Aspin, denied the request for assistance from General Montgomery (PBS). Civilian and military senior leaders were concerned that the appearance of more US forces in Somalia would

look like the US was taking over the U.N. mission. The Clinton administration wanted the U.N. to succeed on its own and therefore denied the request for additional armor troops and gunships. The result of course, was the deadliest and longest battle for the Army since Vietnam with 18 dead and 78 wounded Rangers and Special Forces (U.S. Army). It is important to note the Army was alone in the battle. There were no joint force capabilities available to support the Army.

While many, including the commander of Special Forces in Somalia, agreed that gunships and armor would not have prevented the deaths of some of the troops, there is little doubt there would have been fewer casualties. There was a consensus with the commanders on the ground that the gunships provided a distinct asymmetric advantage over the poorly armed militia. General Downing, commander of the Special Operation Forces was quoted in a report to Congress investigating the Somalia operations as saying the AC-130s "would not have prevented" the casualties in Mogadishu but "would have been useful once the battle started." Special Forces commanders also mentioned in the report to Congress that the gunships "frightened [the] Somali militia so they would have had psychological impact in the October raid" (Gertz, 1995). Clearly, this lightly armed force required more CAS support than was provided. The initial CAS provided by the AC-130s would have gone a long way in providing the needed support if it had been available during this battle.

The commanders on the ground knew they either needed overwhelming fire support from the ground or from the air but the political constraints prevented it from happening. General Powell, Chairman of the Joint Chiefs of Staff, one of the biggest opponents of the gunships, violated his own doctrine by not allowing the troops to have overwhelming force. Senator John Warner supported Powell's view of overwhelming force in the Senate report by declaring, "Only compelling military - not diplomatic policy - reasons should ever be used to deny an on-scene

commander such a request. Those officials who advocated and approved this policy must bear the ultimate responsibility for the events that followed" (Gertz, 1995). Support from the air would have been a more logical choice if they were trying to keep forces in Somalia as low as possible. The gunships crews and support personnel would have to offer a much lower profile than a platoon of M-1 tanks did. The gunships would have given the commanders much more flexibility by providing more firepower over a wider area than a few tanks.

This lack of firepower to support the forces on the ground is a failure to follow training and doctrine. The AC-130 gunships are assigned to United States Special Operations Command for a reason, they train and fight in support of Special Operation Forces. Joint Pub 3-05 Doctrine for Joint Special Operations states that SOF operations "routinely require joint support and coordination." Joint Pub 3-05.1 Joint Tactics, Techniques, and Procedures for Joint Special Operations Task Force Operations, discuss the use of assets to protect the force, "The intent should be to accomplish the mission with the least loss of personnel, equipment, and supplies to the engaged SOF. Conducting the mission analysis process should assist in determining forces, means, and ways required to provide force protection." The fact that these aircraft were not deployed in support of the Special Forces in Somalia is a failure to follow joint doctrine. This fact was obvious enough for politicians to notice. The Senate report on the Somalia operations quotes Senator John Warner as saying, "It is difficult to understand the decision to omit the AC-130 gunships from the Joint Task Force Ranger force package." Senator Carl Levin hit the nail on the head by saying "The AC-130s were part of all the force package options and were included in all of the training exercises. This decision is inconsistent with the principle that you fight as you train" (Gertz, 1995).

The failures of Somalia offered the military a glimpse of future operations as the lone superpower. The world was no longer bipolar, east vs. west, and as a result, it had become unstable. Smaller regional conflicts contained by the Cold War, began to flare up again and increased the need for a more flexible military force capable of influencing these conflicts. While these conflicts may not always have the direct national interest at stake, civilian leadership is often compelled to respond to them for political reasons. Military operations other than war (MOOTW) and smaller, scale conflicts are causing the military to transform into a smaller more joint expeditionary force, but the lessons of Somalia prove that, in this case, the principles of war still apply, specifically mass and security. Army Field Manual 100-7 Decisive Force: The Army in Theater Operations, address the need for operational fires, which include CAS, in MOOTW by saying “the availability of operational fires to the commander acts as a deterrent to escalation of conflict and when necessary provides him additional means to accomplish the mission and protect the force” (U.S. Army, 1995). In the case of Somalia, sufficient CAS could have provided the operational fires needed for both deterrence and protection of the forces.

Operation Enduring Freedom

Perhaps the greatest example to date of the effectiveness of joint close air support (CAS) was Operation Enduring Freedom (OEF) in Afghanistan. OEF was heralded by many, including Defense Secretary Rumsfeld, as innovative, a “transformation” in the way of doing business for the armed forces. If this is to be believed, then the future of military conflict will no longer be one of using divisions of infantry troops and heavy armor to penetrate the defenses and envelop the defending troops in a lightning maneuver warfare reminiscence of the German Blitzkrieg

tactics of WWII. It will be one of a lighter force in fewer numbers using both technology and combined arms to defeat an enemy. The image of Special Forces units dressed in local garb, riding horses, carrying laser range finders and satellite communication sets is presented over and over again as the image of a transformed military (McNabb, 2004). The military has transformed from one that reduces risk by sending in overwhelming force to one that accepts more risk by using fewer forces with a greater reliance on joint forces to provide specific effects such as fire support.

With such a reliance on a joint effort, it is important that the leadership within the services understand what capabilities the other services can provide, the limitations of those capabilities, and how to request them. It is equally important for the services providing the effects to understand how the other services depend upon the effects they provide. In the case of CAS, ground commanders must understand the process of requesting CAS and how it can most effectively be used. Air commanders must understand what the ground commanders' intentions are and how they can best integrate into the plan.

Within OEF, Operation Anaconda provided an ideal example of how the breakdown of this understanding between the joint force commanders caused a near catastrophic operational failure. Early operations during OEF were primarily concentrated on air power and Special Forces working closely with the Northern Alliance commanders to topple the Taliban. This early success may appear to suggest the services were executing in accordance with joint doctrine in providing and coordinating CAS. In reality, it was an ad hoc system developed on the fly. Deconfliction and prioritization was simplified because there were few ground forces spread over a wide area (Davis, 2004). This system would not display its limitations until conventional Army force operations began in March 2002 in Operation Anaconda.

Regular Army ground troops deployed to assist the Special Forces in hunting down the remaining Al-Queda and Taliban forces who escaped into the mountain regions along the border between Afghanistan and Pakistan (Naylor, 2005). On March 2, 2002, elements of the 10th Mountain Division, 101st Airborne Division (Air Assault), and special operation forces (SOF) began an operation with Allied forces to destroy the remaining strong hold of the Taliban forces in the Shah-i-Kot region of Afghanistan (Naylor, 2005). Previous experiences in battle against the Taliban forces, Allied commanders learned, when attacked the enemy would break contact and flee into the surrounding mountains (Davis, 2004). Anaconda was therefore planned to use a relatively light ground force in a hammer and anvil type operation. The plan was to sweep up the valley and force enemy troops into mountain passes where troops waited to destroy them (Franks, 2004). The lightly equipped American troops would not have the benefit of heavy artillery due to the remoteness of the area. They would depend on fire support from both attack helicopters, and fixed wing aircraft (Davis, 2004).

Relying on fixed wing aircraft meant the Task Force commander, Major General Hagenbeck, would have to integrate both Air Force and Naval aircraft into his plan. Unfortunately, both the Task Force commander and his planners had difficulty understanding how the CAS process functioned (Davis, 2004). It also appeared the planners' intelligence estimates for enemy forces were low and combined with the estimated enemy course of action the plan was light on support from fixed wing assets. In her research on Operation Anaconda, Grant (2005) found, "The OPOD [operations order] and related briefings spent very little time on air support and when they did, the main concern was with AC-130 over-watch of key areas and with the role of Apache helicopters and the CH-47s that would be delivering troops" (p. 34). In his research Davis (2004) commented on this same issue:

“This suggests that the omission of Air Force fires may have reflected a general lack of concern with integrating Air Force assets into the operation, rather than a simple desire for tactical surprise. Such an interpretation is reinforced by the fact that the initial Anaconda operations order dated 22 February 2002 showed a clear lack of detailed knowledge regarding the Air Force air assets that would be available. In the CJTF MTN [Combined Joint Task Force Mountain] operations order brief, planners had F-14s, F-15s, F-16s, F-18s, B1Bs, B52s, and AC-130s listed as available. In reality, however, the only air assets that were available at H-hour would be one B-52, one B-1B, and two F-15Es.” (p. 107)

Beyond the intelligence and the concept of operations miscues, what really hamstrung the operation in respect to close air support was the lack of coordination and understanding at the component level. The ad hoc system of requesting CAS mentioned earlier would come back to haunt the ground commanders of Anaconda. The Army commanders and planners assumed coordinating with the air liaison officers (ALO) presently on the staff of the 10th Mountain Division in Afghanistan meant that they had done their part in coordinating with the CAS assets (Davis, 2004). The thought seemed to be as long as the Air Force had time to place missions on the air tasking order (ATO) then the job of coordinating with the Air Force was complete (Davis, 2004). Lieutenant General Mikolashek, the Combined Forces Land Component Commander (CFLCC) in Afghanistan, was not even aware that the critical link in coordinating CAS requests at the Army level, the Air Support Operations Center (ASOC), was never set up during the previous operations in OEF (Davis, 2004). In his notes, Davis (2004) describes the situation in detail:

“The fact that Lt Gen Mikolashek (the supported Commander in Afghanistan) did

not know an ASOC did not exist in this Headquarters demonstrates a lack of understanding of what is required to integrate air and ground operations. OEF, and specifically Operation Anaconda, illustrate that component integration, and command and control are the two most important aspects of joint-warfare, and at times the most challenging.” (p. 92).

Clearly, there existed a general misunderstanding on the part of the planners and commanders of what it takes to coordinate effective CAS.

Another example of the lack of understanding of the close air support system was that the 10th Mountain Division deployed to Afghanistan without any tactical air control parties (TACP) (Davis, 2004). In an effort to keep the boots on the ground to as few as possible, the 10th did not bring along its TACPs. Remarkably, it deployed troops for its air defense units. Grant (2005) discovered Col Longoria, the 18th Air Support Operations Group (ASOG) commander, was aware of the decision and directly questioned the logic:

“Originally, they did not take their TACPs that are normally embedded and lived with them at 10th Mountain. We argued that they made a big mistake. I personally told General Hagenbeck it was a big mistake. He took more air defense. I said, “Sir, the only people I am aware that you are going to shoot down, will be those aircraft that say United States Air Force, United States Navy on the tail.” (p. 52)

This lack of preparation and foresight would add to the frustration of the ground commanders’ requesting for CAS during Anaconda.

Combined with a lack of understanding of the CAS process, the underestimate of enemy forces caused early difficulties in the execution of the operation. Army estimates of enemy forces ranged from a couple of hundred to several thousand. Planners had anticipated the enemy

would run to the hills and into the jaws of the blocking formations established by the 10th Mountain Division forces early in the operation (Grant 2002). It was evident they were willing to rely solely on the AH-64 Apache attack helicopters for organic fire support due to the fact they had no artillery to provide support. The only “artillery” the forces had for support was mortars ranging from 60mm up to 120mm in size. According to McElroy (2002) Major General Hagenbeck, the 10th Mountain Division commander and commander of Combined Joint Task Force Mountain (CJTF MTN) conducting the operation, this lack of artillery support was due to the inability of the Army transport helicopters to safely transport the weapons into the area of operations. The extreme altitudes of the operation area, 6,000 feet in the floor of the valley and 11,000 feet in the surrounding mountain ridges, made the helicopter operations difficult (McElroy, 2002). Figure 1 shows the valley and the terrain to the west that caused the problems. Normally the 105mm howitzer artillery pieces would have been brought in by CH-47s Chinook heavy lift helicopters and the troops by UH-60s Blackhawk utility helicopters. The UH-60s however, could not operate effectively at the altitudes and which forced the CH-47s to bring in all the troops (McElroy, 2002). In essence, the planners were forced to choose between artillery and infantry due to the limited number of supporting helicopters.

Even the Army best form of organic fire support, the AH-64 Apaches helicopters, was unable to hover at the altitude of the valley (Personal conversation with Major Bill Ryan, 17 May 2005). Major General Hagenbeck lauded the Apache as “the most effective close air support asset we had was the Apache, hands down. The Apaches were extraordinary, they were lethal and survivable” (McElroy, 2002, p. 7). Amazingly enough, in the next line the general goes on to say that of the six Apaches they had for the operation, only two were operational by the end of the first day due to damage sustained in combat. Although most were later returned to service

after repairs, they could not exactly be classified as survivable (Davis, 2004). The result was Major General Hagenbeck requesting more AH-64 support as well as requesting support from the Marines with AH-1 Cobra attack helicopter (Grant, 2005). The failure of the Apache to provide a source of firepower coupled with the lack of preparation and understanding of CAS would have major implications on the Army's ability to continue the operation. Davis (2004) stated it best by saying:

“With General Lodin and the Apaches out of the fight, and only half of TF [Task Force] Rakkasans' forces in place, the complexion of the operation changed significantly from an operation focused primarily on land power to an operation increasingly dependent on Air Force, Navy, and later Marine air assets. Unfortunately, because Maj Gen Hagenbeck had not laid the groundwork for a successful joint operation, the increasing dependence on Air Force support would become a source of frustration.” (p. 113)

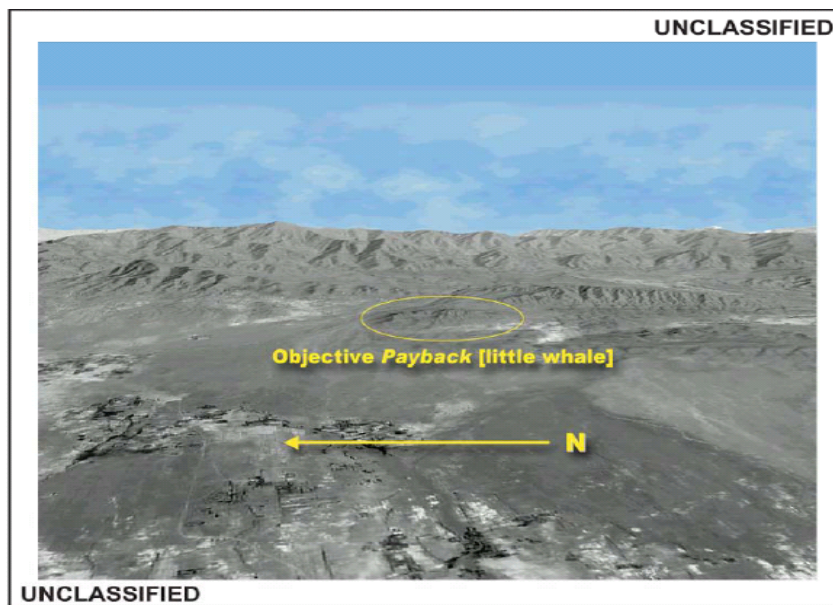


Figure 1 Operation Anaconda Operating Area (Grant,2005)

Despite the Air Force's efforts to coordinate the support provided to the Army, Major General Hagenbeck had concerns with the support he received from fixed wing assets. His

concerns where with three major issues; slow response time, munitions effect and procedural problems (McElroy, 2002). He stated it took anywhere from “26 minutes to hours” for the Air Force planes to get ordnance on target, which made it difficult if not impossible to engage fleeting targets (McElroy, 2002). Between the Army and Air Force there seems to be a discrepancy on what the definition of responsive CAS. On this subject Davis (2004) quotes Major General Hagenbeck as saying:

“More important than anything else was being able to put responsive fires on the target and even there we talked past each other. Responsiveness to me if you want to put a clock on it is from the time the guy on the ground is screaming for support until the bombs drop and the bombs hit the target. That is responsiveness. Responsiveness from an Air Force standpoint—*from what I’ve learned*— was from the time they gave the execute order to the pilot, they could be working it all but, until they said “aircraft one” that is your target, then their clock started [emphasis added].” (p. 119)

In an attempt to refute his statements, the Air Force published the source of this data (Figure 2). The author noted 26 minutes was an average time not a minimum time as stated by Major General Hagenbeck and that the data contained only a small portion of the total number of sorties flown (Grant, 2005). Whether or not the data was accurate is not as important as the fact there was a perception of slow response times. This disputing statement does little to address the perception of delay. Perhaps addressing why the perception existed would do more in the way of alleviating the conditions that caused it. More likely than not the perception was a product of the frustration created from the lack of understanding of the capabilities and lack of coordination with the CAS providers prior to the operation’s start.

Evaluating CAS Response Times

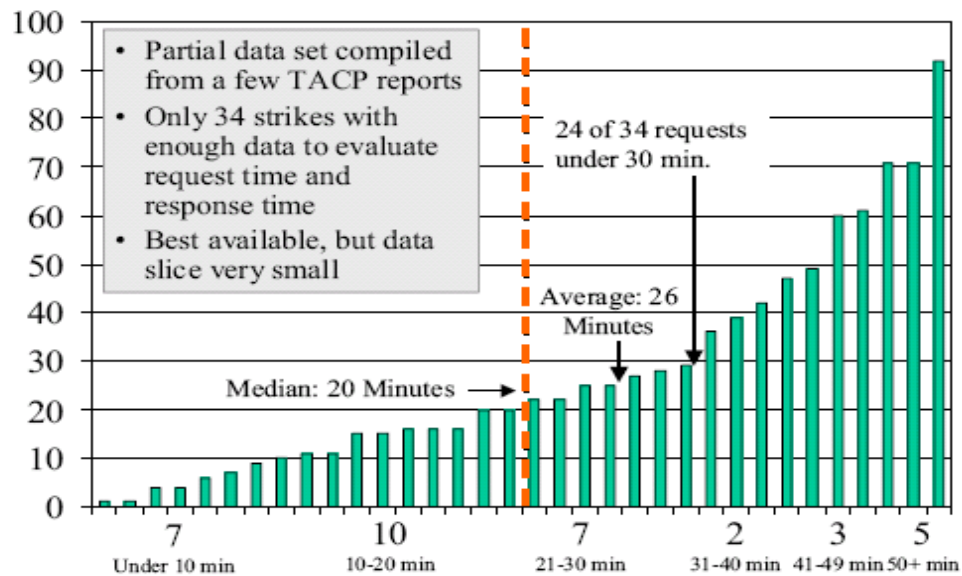


Figure 2 CAS Response Times (Grant, 2005, p108)

This lack of coordination would increase Major General Hagenbeck's frustration with the effects provided by CAS once it did arrive. In several cases he was frustrated by the Joint Direct Attack Munitions' (JDAM), a GPS guided bomb, inability to destroy moving targets (McElroy, 2004). Once the targets had stopped moving for a period of time the smart munitions had no difficulty destroying them. Targets such as trucks, used in the re-supply of enemy forces, were difficult targets and could only be destroyed if they remained stationary for a reasonable amount of time (McElroy, 2004). When asked by McElroy (2004) about munitions effects desired by the ground commander Major General Hagenbeck responded, saying: "All that matters is whether or not the munitions are time-on-target and provide the right effects." (p. 8). This clearly demonstrates a lack of understanding of the importance to properly plan for the role of CAS in any operation. Munitions cannot be on time and provide the right effects without careful and well thought out planning. Aircraft, regardless of the service, do not have a smart bomb that

destroys every type of target. Different targets often required different types of munitions to destroy them. Figure 3 demonstrates this by showing the mix of weapons used by aircraft supporting the operation. Each of these weapons require coordination in advance to prepare for the build up, loading and mission planning required to drop them successfully. The preparation time combined with the length of time required by the aircraft to fly from the Arabian Gulf or Diego Garcia to Afghanistan creates a lengthy cycle of operations. Without proper coordination between the ground planners and the air planners, this length of time can certainly frustrate the ability of CAS aircraft to provide the right effects.

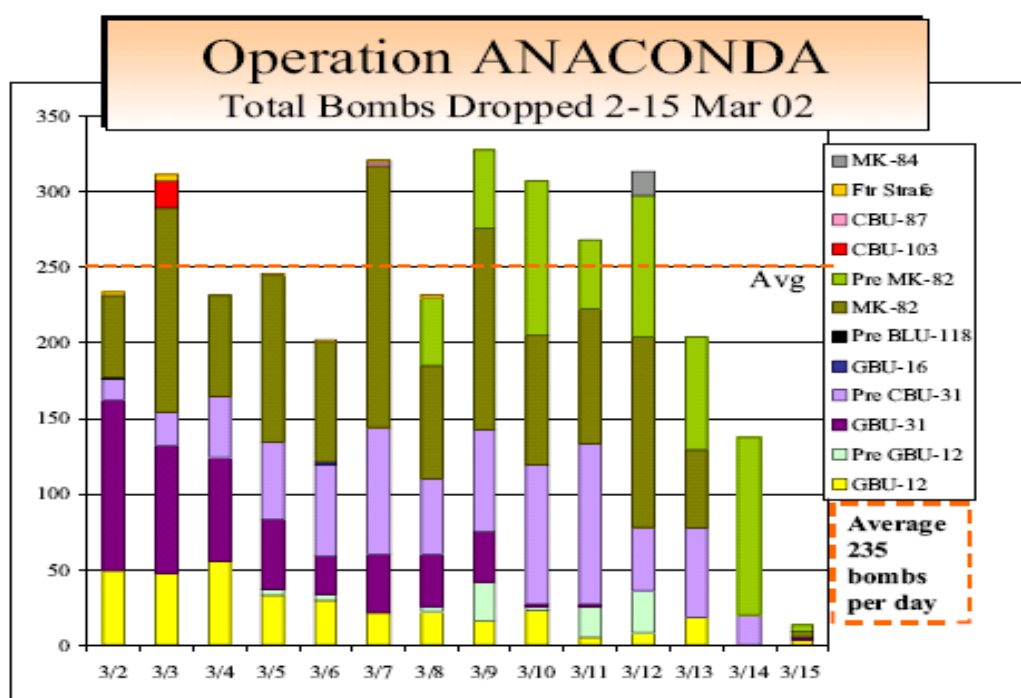


Figure 3 Total Munitions Dropped 2-15 Mar 02 (Grant, 2005)

The last and what seemed to be the most contentious areas of concern of the joint task force (JTF) commander was the perceived lack of Air Force willingness to work through procedural and airspace management problems. One very important “procedural” issue was that of the rules of engagement (ROE) that covered the pilots’ ability to employ ordinance. These rules are

normally in place to reduce collateral damage and eliminate the potential for fratricide. Davis (2004) quotes the JTF commander as saying:

“This issue goes back to who is in charge. Here is what one of my battalion commanders told them [Air Force] in one of these closed door meetings, ‘Do not talk to me about [expletive] fratricide don’t be sitting back in PSAB [CAOC] making a decision whether to drop a bomb when I’m calling for it.’ Lt Gen Hagenbeck noted, “Fratricide is not just an Air Force problem— it’s everyone’s problem. But the real bottom line is that doctrine says the ground tactical commander is in charge and if there is a ground tactical commander calling for it then don’t second-guess him. As this battalion commander said, ‘If I’m killed and my troops are killed, that was the risk I was willing to take. If I did not need it, I would not have asked for it.’ The ground commander is the one that ultimately pays the price if he is calling for it.” He went on to say that, “There was an uneasiness about killing some of our own forces. We have not worked together before in CAS, but it got to be border-line ridiculous because of the time lag from calling for and getting bombs on target because they were not fixed targets.” (p 119)

There was also the issue of who and where airstrikes could be conducted. At the start of Anaconda ground forward air controllers (GFAC) were unable to call in airstrikes outside of designated Joint Special Operations Areas (JOSA) (a designated area where special operation forces were located) unless it was a defensive strike. All preplanned strikes and time sensitive targets strikes had to coordinate through the chain of command all the way up to Central Command Headquarters (Grant, 2005). The limitations slowed response times and frustrated commanders. This point of frustration was rooted in the lack of coordination between the

components prior to the operation. Prior coordination could have clarified engagement criteria and sped up response times.

The last major area of concern effecting the joint employment of CAS in Operation Anaconda was the failure to establish command and control in accordance with doctrine. The coordination issue as explained by Davis (2004) was at the core of the frustration between Army and Air Force commanders. More specifically his main point was that the commanders failed to establish the proper chain of command and establish procedures for CAS in accordance with joint publications. Some felt the problem arose from a personality conflict between the Air Force and Army commanders in the JOA. In his research, Naylor (2005) found there to be a “conflict between Mikolashek [Army] and Moseley [Air Force] that filtered down to their staffs” (p136). The lack of communication surely contributed to a failure to establish an air operation center (ASOC) which was perhaps the biggest link missing in the chain. An ASOC, by doctrine, is a corps level function that provides coordination within the Corps’ area of responsibility. What makes the ASOC such a critical requirement is its ability to provide communication between Army commanders and Air Force assets during the execution of daily operations. The ASOC provides prioritization and deconfliction of those assets prior to handing them off to GFACs. Davis (2004) noted this lack of coordination by stating the following:

“A second problem that degraded air and ground coordination was challenges in interoperability of joint communication equipment, availability, and accessibility to tactical satellite (TACSAT), and limitations in appropriate air support communications equipment. Together these forced Maj Gen Hagenbeck and his staff to operate without a high degree of situational awareness. Many problems can surface if an organization is not properly resourced. One such problem was that Major Donnelly had limited capability to request air

support at extended ranges because CJTF [combined joint task force] MTN [mountain] was not resourced as a JTF. The Shah-i-Kot Valley was 221 kilometers from Bagram and, unless radio traffic was relayed through AWACS, Donnelly did not possess the ability to independently conduct line of sight (LOS) communications with forces in the valley. This interfered with the ability of Maj Gen Hagenbeck to maintain situational awareness and put an additional burden on the ALOs and G-FACs who were, at times, forced to perform the functions of an ASOC while engaged in combat.” (p. 121)

Clearly operations could have run smoother had either the commander or his staff, including Air Force staff members, had foreseen the need to set up the ASOC earlier in the planning phase.

What should be taken from this analysis of Operation Anaconda is the importance of the Joint Task Force Commanders ability to understand the integration of CAS into the plans. The execution of CAS has come a long way since WWII but it still has its limitations. CAS can provide a distinct advantage to a commander if used effectively. The effective use of CAS requires many elements to function correctly. One element is that doctrine must be followed when establishing command and control of CAS assets. Another element is the understanding commanders and planners must have of CAS effects and limitations. The last element is training. Many of the problems encountered in Anaconda could have been overcome with regular joint training of both ground and air components. Air Force and Army units get minimal joint training opportunities. The training they do receive at the Army’s Joint Readiness and Training Center (JRTC) tends to be limited by scheduling and range restrictions (Davis, 2004). Neither service gets a true opportunity to integrate fully into the others training.

Missions such as Anaconda are example of things to come in the future of the transforming military. It is likely to become the rule rather than the exception. A lighter more rapidly

deployable force lacking overwhelming firepower will become the norm. Marine units have been an expeditionary force for some time and have never had the organic fire support the Army has enjoyed. They have made up for the lack of heavy armor and artillery by insisting on control of their fixed wing aviation assets. As the branches of the military become more expeditionary, each branch increases its reliance on other services to provide support. This joint interdependency requires great coordination between the services in any type of future conflict. CAS has been an interdependency between the Army and Air Force since doctrine was refined in WWII. The future Army units will have a greater need for CAS. The Air Force must be ready to fulfill this need.

CHAPTER 3

TRANSFORMATION

“We need rapidly deployable, fully integrated joint forces, capable of reaching distant theaters quickly and working with our air and sea forces to strike adversaries swiftly, successfully and with devastating effect.”

Secretary of Defense Donald Rumsfeld,
Speech at National Defense University

The U.S. Department of Defense is currently in the middle of a period of transformation. Understanding where the transformation process is taking the military is important to understand what capabilities will be needed when it is complete. Transformation has taken many shapes throughout the services and each service seems to be headed in its own direction. Some in the Air Force think the Air Force has already completed its transformation. When the author recently asked Air Force Brigadier General (select) Longoria what the Air Force was doing to transform, he responded by saying “We’ve already transformed, we have AEFs.” At Joint Forces Command, transformation takes many forms, from new ways to organize and staff joint force headquarters, to new computer databases intended to improve the targeting process. Like any other period of change, buzzwords, and acronyms have added to the confusion. Effects Based Operations (EBO), Operational Net Assessment (ONA), and Network Centric Warfare (NCW) are being touted as the latest and greatest keys to a successful military transformation. The transformation process is larger and more important than just new technologies. It is a new way of thinking and organizing forces in order to defeat future conventional and non-conventional enemies more rapidly than before.

In the current process of transformation, the Army will become a light, deployable force more dependant on the Air Force and Navy to provide CAS. Regardless of technology, the U.S.

will have to place boots on the ground in order to show national resolve during conflicts. When troops are on the ground, there must always be overwhelming firepower to support them regardless of the political reasons that put them there. Even during military operations other than war (MOOTW) it is essential to have the firepower available to ground commanders, a lesson learned in Somalia. Army Field Manual 100-7 states, “In MOOTW the availability of operational fires to the commander acts as a deterrent to escalation of conflict and when necessary provides him additional means to accomplish the mission and protect the force.” The military must move away from conducting mass wars of attrition due to the lack of “peers” capable of directly threatening the U.S. It must move closer to preparing for smaller insurgency fights and MOOTW operations.

Since the Goldwater-Nichols Act in 1986, the Armed Forces of the United States of America have been forced to work more closely together in conducting operations. It has been nearly 20 years since Congress passed the law and the Department of Defense is still struggling to plan and execute joint military operations. It would therefore come as no surprise to find Army transformation plans are not coordinated with Air Force transformation plans. Reviewing and comparing these two plans is necessary to understand the future of close air support. It is also important to determine what each service expects from the other in regards to CAS. If the transformational plans of either service are not nested with the other on the issue of CAS the results could be disastrous.

Army Transformation

Each of the services has published transformation roadmaps showing how each plans to conform to the Secretary of Defense’s vision of transformation. Secretary of Defense Rumsfeld

described his vision of a transformed military as “we need rapidly deployable, fully integrated joint forces capable of reaching distant theaters quickly and working with our air and sea forces to strike adversaries swiftly, successfully, and with devastating effect” (U.S. Army 2003). In this statement, Secretary Rumsfeld is aiming squarely at the Army and its legacy of cold war armaments, such as large armored forces. The Army is undergoing a lengthy transformation, which will make it a lighter and more expeditionary force capable of responding to crisis more quickly. In 1999 General Shinseki announced the release of the Army vision on transformation saying, “Heavy forces must be strategically deployable and more agile with a smaller footprint and light forces must be more lethal, survivable and tactically mobile” (Torchbearer, 2003). More recently the Chairman of the Joint Chiefs of Staff Air Force General Meyers was asked for his vision of transformation and in his response he stated it was not new technology but a force that is “fast and agile” (Personal communication with JAWS seminars, April 11, 2005)

Clearly, these leaders see the Army as a force that must change not only its weapons technology but also make itself more responsive and expeditionary (U.S. Army, 2004). The Air Force changed to an expeditionary mindset as a result of the continuous deployments in the 1990s to Operation Southern and Northern Watch in Iraq (Paulk, 1997). The Navy and Marine Corps have been expeditionary forces since they were created. The Army is now in the middle of transforming to a force more capable of rapid deployment. By doing so the Army will of course have to become lighter and their new units will become more dependent on CAS (Grant, 2003). The Marine Corps ground units have traditionally deployed with less armored and artillery than Army units. This forces them to rely more on CAS from attack helicopters and fixed wing aircraft. Marine aviation exists primarily for the purpose of supporting their ground forces and they are often very reluctant to allow any other service to use their assets for any other

mission (Grant, 2004). As the Army transforms it will rely more on a joint CAS capability to provide similar support (U.S. Army, 2004).

The Army's vision of transformation uses two major avenues of approach to leads it to it desired end state. The first is the reorganization of the current force into modular Brigade Unit of Action (UA) leveraging the assets of today's Army (U.S. Army, 2004). These brigades are organized to quickly deploy globally in order to respond to crisis. They are also designed to be precursors for the second avenue of approach, the future force (U.S. Army, 2004). The future force will include the modular design surrounded by a new system of weapons called the Future Combat System (FCS). The FCS is an array of lighter armored vehicles both manned and unmanned networked together to improve battlefield awareness for the soldier (Kaplan, 2005). The finished product of Army transformation is a future force that combines the capability to rapidly deploy worldwide and provide information superiority to all soldiers with the FCS link (U.S. Army, 2004).

The concept of the Brigade Unit of Action (UA) is to have a lighter, more rapidly deployable force that is expeditionary and is capable of responding to threats worldwide. These units are brigade in size and are referred to as Units of Action (UA). These UAs are to be capable of deploying anywhere in the world in 96 hours. Units of Employment (UE) are division in size and are to be employable in 120 hours (MacGregor, 2004). The emphasis on these units is that they are highly mobile in the Army's frame of reference and therefore lightly armored. Lightly armored surely means less survivable without some other kind of protection, which of course means they will also be very reliant on joint forces to provide fire support.

In his book on transformation, Army Colonel Douglas MacGregor speaks to both, a more mobile Army in need of transportation, and a lighter force in need of fire support. He states his

thoughts on what is needed for the future, “much of the fire support and C4ISR that will enable Army operations in the future will be provided by other services as part of a joint war fighting architecture. More important, moving the old force faster is not a vision of the future it is a vision of the past” (MacGregor, 2004). He sees the future force not relying heavily on fire support from organic assets such as armor or artillery. His argument is that these traditional weapons are not designed to deploy rapidly. Heavy armor will likely be the first weapon to drop out of any rapidly deploying force because only one M-1 can be airlifted by a C-5 or C-17 at a time (M-1A1 Abrams). The Apaches lack of rapid deployment capability limited its ability to conduct combat operations in Operation Allied force (Lambeth, 2002). Operation Anaconda demonstrated how geographical limitations could restrict artillery support. The Army’s Transformation Roadmap (2004) acknowledges an increase dependency on joint fires, “Interdependence of joint fires will be vital to mitigating risk and reducing reliance on organic fires in a joint expeditionary environment” (p 2-8).

A Rand study conducted research on this issue as well. The researchers attempted to discover the relationship between lightly armored forces and the CAS they required in different scenarios. Most scenarios had the light forces defending themselves from either ambush attacks or attacks from a larger force. Response time and effectiveness of firepower were critical to success in most cases. They concluded in most cases, fixed wing aircraft were the best answer to providing CAS for light, rapidly deploying forces. The decision was based on three factors; fixed wing aircraft are self-deploying, require less lift assets to deploy and provide decisive firepower. Limitations of fixed wing aircraft proved to be responsiveness and persistence (Don et al, 2002).

Reviewing Army transformation documents leads one to quickly ascertain they intend to rely more on the other services, in particular the Air Force, to provide operational fires for their future force. The Army Transformation Roadmap lists joint interdependencies as one of the challenges the future Army force faces (U.S. Army 2004). It states, “Rapidly transforming the Army to meet the challenges of the projected joint operational environment while engaged in a prolonged conflict will require an unprecedented degree of joint cooperation” (U.S Army, 2004, p 2-7). Listed as one of “the five key joint and expeditionary interdependencies” is joint fires and effects (U.S. Army, 2004, p 2-7). Clearly, the Army intends to rely more heavily on airpower in future operations, whether it comes from the Air Force or Navy, it does not matter. The Army Transformation Roadmap goes on to say the joint fire “Frees commanders from reliance on organic fires and requires absolute dependence on joint fires” (U.S. Army, 2004, p 2-8). An illustration of this reduction of organic fires is the plan to convert 39 field artillery battalions into military police, infantry, and civil affair units (Future Force).

In summary, it appears the Army’s plan for transformation is a lighter more deployable force capable of reacting to international crisis much quicker than it ever has in the past. To do this the force must reduce the numbers of legacy weapon systems such as armor in brigades and leverage the development of Effects Based Operations created by transformation. Transformation will likely increase the Army’s relevance in future conflicts and makes it more likely to deploy in order to defeat elements of terrorism, stabilize failing regions and deter aggression. In addition, this same force must be capable of creating the same overwhelming force that has come to dominate traditional armies. There must be a balance between the rapidly deploying force and heavy overwhelming force. That balance is created through leveraging joint capabilities. Col MacGregor (2004) put it best when he said, “if U.S. Army forces are integrated into joint EBO,

America's asymmetric advantage in surveillance and strike, combined with Army combat forces, will confront future enemies with the choice of surrender or annihilation, regardless of the terrain, the weather or the nature of the particular enemy."

Air Force Transformation

The comparison can be made between today's transformation and the "transformation" the military went through in the years between the world wars. Between the wars, the military developed new ways of applying the technology. The industrial age produced new weapons, like the machine gun and the airplane, which required creation of new tactics, techniques, and procedures. It was during this time the Air Force came of age. Since then the Air Force has leveraged technology to advance new tactics. Technology such as the atomic bomb, jet engines, stealth aircraft, and precision strike weapons all have influenced how the United States has fought wars. By reading the Air Force's Transformation Flight Plan it is evident they plan to leverage technology to help advance the way it will continue to fight. Unfortunately, the idea of transformation is more than just technology. It is more about developing ideas on *how* to fight rather than *what* to fight with in the future conflicts. General Meyers recently said in his discussion with the Joint Advance Warfighting School that transformation is not about new weapons but about what happens "between the ears" of military forces (Meyers, 2005). In light of this statement, what are the Air Force's transformation plans and how do they affect the ability to provide support to the Army's objective force?

To begin with the Air Force's flight plan demonstrates the importance of integrating joint efforts in future conflicts by stating it must "Work with other services, Joint Staff, Department of Defense (DoD) agencies, and allies/coalition partners to enhance joint and coalition

warfighting.” (Department of the Air Force, 2004) It goes on to say, “The Air Force puts a premium on joint enabler. In fiscal years (FY) 2004-2009, the Air Force will spend 23 percent of its Total Obligation Authority on joint combat forces such as *close air support fighters* and gunships, loitering indirect fires, and advanced air-to-ground munitions” [emphasis added] (Department of the Air Force, 2004). While these statements go a long way in the headlines, in reality there is little difference in how business has been done in the past. While these items are important to the CAS mission, they are still technology solutions. What is not mentioned is what is being done to develop the “matter between the ears” of the pilots flying the missions and the troops on the ground requesting support. For single seat fighters, CAS is one of the most challenging missions to execute. Spending money on advanced technology may lighten the workload but what is really needed is a commitment by leadership to conduct realistic joint CAS training with the ground forces.

Further review of the flight plan provides seven capabilities the Air Force provides to the ground commander. Of those seven capabilities only one incorporates CAS. The capability concerning close air support reads as follows, “Air and space assets provide persistent, adverse-weather fire support to light forces using new through-weather precision weapons. This allows ground forces to lighten-up and improve responsiveness by reducing pressure for early deployment or organic deep strike assets.”(Department of the Air Force, 2004, p14) While this is a step in the right direction for the future it does not go far enough. The Air Force has always had the ability to provide CAS to the Army, this is nothing new. Persistent CAS is one of the keys to success if the Air Force is going to be capable of supporting the Army’s objective force concept. The RAND study mentioned earlier declared the only way to keep these types of forces from sustaining unacceptable combat losses was to provide persistent and responsive CAS. This

was especially true in an urban environment where artillery may not be useful due to collateral damage (Don et al, 2002). Using a fighter such as the F/A-22 and the Joint Strike Fighter (JSF) in the future to provide CAS may not be enough to provide that persistence. After all, the multi-role fighter design was tried before and each time it was found lacking in ability to satisfactorily accomplish the CAS mission. Bombers certainly offer a credible source of persistent firepower over a battlespace but they have limitations in environments of high threats.

Another highly acclaimed vision of Air Force transformation is the global strike mission. Much of the transformation flight plan discusses the ability of the Air Force to conduct Global Strike. The vanguard for global strike in the future is the Global Strike Task Force (GSTF). Since most of the U.S. future forces will not be located overseas, access to ports and airfield will be key to any U.S. force, which intends to flow into a battle space (U.S. Air Force 2004). Denying access to those ports and airfields would be critical to stopping or at least slowing any U.S. attacking force. Degrees of denying the use of those ports and airfields can go from placing surface to air missiles nearby to complete destruction of them. The GSTF is the Air Force's version of a kick the door down force that will allow access to those critical points of debarkation. According to the Air Force the joint force commander will need a force capable of penetrating a heavily defended airspace to destroy the enemy integrated air defenses (IADS) and allow follow on forces, including non-stealthy legacy fighters, such as F-16 and F-15, into the joint operations area (JOA) (Jumper, 2001). The assets allocated to such a force are the stealthy F/A-22 and B-2 aircraft, which would be necessary in any environment protected by the next generation of Russian built surface to air missiles (SAMs) such as the SA-10 or 20. There should be no doubt that this capability to "kick the door down" must be created because it will most certainly be needed. The problem comes when the door has been knocked in and the threat

has been reduced, then who picks up the follow-on role of supporting the troops on the ground? The cost of these aircraft will almost certainly prohibit their use in a CAS fight like the one seen on Robert's Ridge in Operation Anaconda where fighters were called in for numerous low altitude strafing passes on enemy targets. The GSTF is a needed capability for the future JTF commander to have and it does facilitate the Army's objective force to enter an anti-access environment but that same objective force will need considerable assistance once on the ground.

Another Air Force transformational document, the USAF Transformational Flight Plan FY 03-07 barely mentions the term close air support. It lists six core competencies that must be maintained through the transformational process. These competencies and their definitions are listed below:

1. **Air and Space Superiority:** the ability to control what moves through air and space to ensure freedom of action
2. **Information Superiority:** the ability to control and exploit information to the Nation's advantage to ensure decision dominance
3. **Global Attack:** the ability to engage targets anywhere, anytime to hold any adversary at risk
4. **Precision Engagement:** the ability to deliver desired effects with minimal risk and collateral damage to deny sanctuary to the enemy
5. **Rapid Global Mobility:** the ability to rapidly position forces anywhere in the world to ensure unprecedented responsiveness
6. **Agile Combat Support:** the ability to sustain flexible and efficient combat operations

Noticeably absent from this list of core competencies is close air support. It could be that the author(s) intended for it to be included in the precision engagement competencies but there is little mention of CAS in the description. CAS is limited to the mention of the Joint Strike Fighter (JSF) replacement of the A-10 and F-16.

Admittedly, the Air Force does see its future in supporting the ground forces. In the 2004 Transformational Flight Plan there is a "vision" on the importance of fighting jointly, no doubt a product of the recent lessons learned in Operation Iraqi Freedom and Operation Enduring

Freedom. The Air Force devotes a whole page to issues being worked with other services and allies, some of which pertain to CAS capabilities. They say:

“The Air Force believes its future is closely tied the future of American land forces and wants to demonstrate its strong commitment to air-to-ground support. The Air Force intends to fully integrate with all land forces and develop evolving joint air-ground doctrine, tactics, techniques, and procedures.” (Department of the Air Force, 2004, p 16)

A few of the more promising issues for improvement are the development of the joint air liaison element, joint training programs, and joint simulation for air combat support (Department of the Air Force, 2004). Each of these programs has the potential to have a tremendous effect on joint capabilities if leadership makes the right amount of commitment.

The area that has the greatest potential to improve CAS capabilities and therefore receive the greatest commitment is the development of joint training programs. The Air Force Transformation Flight Plan focuses on this issue by stating that “the Air Force supports the creation of a Joint National Training Capability, which will provide the environment for realistic joint exercises...” and that “Future training will also *likely* include an increased emphasis on close air support...” [Emphasis added] (U.S. Air Force, 2004). Training is at the heart of proficiency in any task that must be performed as dangerous as CAS. To acknowledge the need for a realistic joint exercise is a major step in the right direction. The commitment to the execution of this training is the next step.

In summary, the Air Force focuses much of its transformation on strategic initiatives like global strike. With the recent conflict in Afghanistan and Iraq still underway, the Air Force has placed some emphasis on CAS during this period of transformation. What is important to remember is that in the past the Air Force has pledged itself to providing better CAS capabilities

following each conflict. That commitment waned as time passed and budgets were constrained. With that in mind, the transformation process will take years to complete and budget priorities will undoubtedly change training priorities. It is easy to be caught up in the technology of transformation and use the F/A-22, the small diameter bomb, and the Joint Strike Fighter as proof that the Air Force is transforming. Successful transformation will come when the Air Force and the Army realize that they must rely on each other to provide the forces and effects required for success in the future joint operating environment. When that happens then the military will be truly joint interdependent and a transformed force.

CHAPTER 4

PREPARING TO MEET FUTURE CHALLENGES

Technology offers the U.S. military the ability to continue to dominate every other military on the globe. That ability to dominate would quickly evaporate if the U.S. relied solely on technology. For technology alone is not the answer to all problems, it must be combined with the ability to apply technology in order to achieve success. In WWI, commanders learned this lesson when they were unable to overcome the changes required by modern weapons like the machine gun and as a result, millions of soldiers were needlessly slaughtered. When it comes to applying technological advantages in the midst this age of transformation there are three areas that will influence how CAS is conducted in the future. First and most importantly, is the Air Force's long history on giving CAS a low priority going to change? Second, the Air Force and Army current commitment to conduct joint CAS training on a regular basis. Finally, how will the Army's transformation influence the Air Force?

Air Force's Priorities

As noted earlier, CAS has long been given a lower priority than other missions have in the Air Force. At best, it comes in third behind air superiority and air to ground interdiction missions. Achieving air superiority should be, without a doubt, the number one priority for the Air Force. What should be questioned is the amount of time, money, and effort devoted to achieving it. To answer that question the future of aerial combat must be examined. Most potential adversaries' air-to-air threats will most likely not be a challenge to the Air Force that

exist today and will be even less of a challenge with aircraft like the F/A-22 and the Joint Strike Fighter (JSF). As the Air Force and Navy air power have proved over the last 60 years, it is not cost effective to go head to head with U.S. airpower. No other nation can afford to construct and maintain an air force comparable to the combination of the USAF and US Navy that will successfully challenge its supremacy. In his book, *Transformation Under Fire*, Colonel MacGregor (2004) notes that “air to air combat is increasingly unlikely” in future conflicts. While this may sound sacrilegious to most fighter pilots, especially coming from an Army officer, Colonel MacGregor supports his claim with some convincing numbers, the aircraft shot down by the Air Force since WWI.

<u>Conflict</u>	<u># of Aircraft Destroyed</u>
WWI	624
WWII	15, 811
Korea	894
Vietnam	137
Desert Storm	38
Bosnia	4
Kosovo	5

Using these numbers as justification, one can make the case air superiority in future conflicts will be a given. The challenge to air superiority will most likely come from surface to air missiles like the SA-10 and 20. Defeating these systems will require F/A-22 stealth technology and air to ground weapons. Once defeated the remaining role for the Air Force fighters, bombers and unmanned aerial vehicles (UAV) will be to support the land force commander’s efforts. This is an important point because the amount of time, money and effort the Air Force spends on gaining and maintaining air superiority should be proportional to the threat. Does the Air Force need a fleet of aircraft dedicated to the sole purpose of gaining air superiority like the F-15? It

could be said that is why the Air Force enjoys such an advantage in the first place and they would be right. The F-22 was re-designated the F/A-22 and configured to drop precision air to ground weapons because many believed the nation couldn't afford to invest in a single role aircraft (Bosker, 2002). In this age of transformation the issue becomes how much training time does the Air Force devote to a skill that becomes less and less likely to be needed and devote more to what is definitely going to be needed.

The two most recent, major combat operations, OIF and OEF are examples of what can be expected in the future. In OEF, it was mostly an integrated Special Operation Force and air power operation that helped the Northern Alliance defeat the Taliban. In OIF it was a relatively small fast moving ground force combined with the overwhelming air power of the Air Force and Navy. What both of these operations had in common is the heavy reliance on air power and more specifically close air support. In OIF, ground commanders made 78% of the target nominations for the air tasking order (ATO). In the actual execution of OIF air operations, 79% of the targets struck were CAS or CAS related targets (USCENTAF, 2003). Targets struck in support of the ground commander operations that were preplanned fixed targets or traditional air interdiction mission were only 1% of the total (USCENTAF, 2003). Targets struck in support of air superiority totaled only 7% (USCENTAF, 2003). This is certainly a monumental change from the Desert Storm air operations where CAS was the last priority on the list of missions for Air Force assets (Hallion, 1992). These numbers point to a change in the priority of missions conducted in joint operations environment.

The case could be made that the Air Force did not have much choice in the matter because air superiority was already in place over much of the country when operations began. There were also the last minute changes in the plan the ground forces jumped off before the air

phase began (Franks, 2004). This early execution of the ground phase coupled with a relatively light ground force, when compared the number of Iraqi defenders, caused the Air Force to place emphasis on CAS. Another explanation is what was demonstrated in Iraq was a vision of a transformed military creating a synergistic and asymmetric effort through the use of joint forces. Gen Wallace, commander of the V Corps in OIF summed it up best by saying:

“There were episodes in the fight when operational maneuver caused the enemy to react; when the enemy reacted it allowed us to employ joint fires against him which, in turn, allowed our operational maneuver to be more successful. Our joint fires were very effective. We had CAS in abundance. First, the Army should give the Air Force credit for being as good as it is. We’ve got the best Air Force in the world.” (Field Artillery and Joint Fires Conference Brief, 2003)

Joint Training Opportunities

The next area requiring emphasis is the priority given to training for CAS. Training for CAS is not limited solely to the Air Force. There is evidence of the Army looking for its officers to become more familiar with the effects and limitations of CAS. Each of the major Army combat units produced lessons learned and each has had an input or two on the use of CAS. Most of these lessons have the common themes of training and education. The surprise is that the Army commanders noted how Army officers should become more knowledgeable on the use of air power. In October of 2003, the 1st battlefield coordination detachment (BCD) presented a list of lessons learned following Operation Iraqi Freedom on joint operational fires that included lessons learned from CAS operations. One important lesson was the need to improve institutional training for Army officers when it comes to learning how the Air Force operates.

Some of the suggestions included improving “understanding how the Air Force generates combat power” (1st BCD, 2003). In particular, the suggestion was to understand the concepts of Air Force C2, impact of air refueling operations, low density high demand assets, and how assets, once resourced, are flexible in location but not necessarily in time. It even went so far as to say personnel going to plans and operation assignments should attend Air Force schools (1st BCD, 2003). Clearly, the Army recognizes the need for greater understanding and training between itself and the Air Force.

Others have recognized the need for greater training between the Air Force and Army. The Congressional subcommittee on Total Force and Readiness requested the Government Accounting Office (GAO) conduct a review of CAS operations following OEF. What the GAO found were some of the same issues that have caused many of the problems with the execution of CAS since the Air Force became a separate service in 1947. The first issue was the lack of training between the Air Force and the Army in a joint environment (GAO, 2003). Both the Air Force and the Army conduct large-scale employment exercises. The Air Force conducts Red Flags at Nellis AFB in Nevada. Normally the extent of joint training at Red Flag is when the Marines and Navy participate in the exercise. The Army conducts large-scale armor centric exercises at the National Training Center (NTC) at Fort Irwin, California (Erwin, 2003). These exercises are the best simulations the services have to offer these airmen and soldiers prior actual combat. The problem is neither has committed to combine both air and ground forces into one large training exercise. In other words, the Air Force does not include Army ground forces at Red Flag and the Army gets little involvement from fixed wing aircraft at the NTC. Colonel Bollenberg, a senior Army officer at the Joint Advanced Warfighting School, who has attended six exercises at the NTC, said he had only seen two A-10s in each of the exercises. Even when

CAS aircraft supported the NTC it was not used effectively. In a speech given to the Air Force Association in 2004, Air Force Chief of Staff General Jumper commented on the use of Air Force assets on the ranges of Fort Irwin and how it needed to be improved:

Generations of people at the National Training Center at Fort Irwin watched airplanes overhead while at Nellis Air Force Base every day of the year we put close air support into Fort Irwin. They watched airplanes for years appear to support, but because they wanted to make sure that the ratios between the opposing forces on the ground, enemy forces on the ground and maneuver elements of the Army units were being tested in the right ratio, air power was never allowed to have an effect on the opposing force, on the Red Force. So generations of Army officers learned they could look up and see the airplanes and think, 'they never do anything good for me.' We're going to fix that. We're going to exercise our air and ground together in ways that assure that our Army leaders understand and know what air and space power can do for them.

In April 2005, Joint Forces Command organized the first ever, Joint Red Flag. The Army's involvement consisted of the combining of its air defense exercise, Roving Sands, into the Air Forces Red Flag exercise (Geeslin, 2005). However successful a start to joint training the Joint Red Flag was it offered no training for CAS.

The second issue raised by the GOA (2003) report was the restrictions on home station training for pilots and soldiers. Speaking strictly from the pilots perspective the author has had first hand experience with lack of home training assets. Typically CAS sorties were flown with no ground forward air controller (GFAC), to control the missions leaving flight leads to simulate the GFAC over the radio. GFACs were often difficult to schedule due to the physical distance between range locations and home station of the GFAC. When GFAC were provided there was

a distinct difference in the ability of the pilots to acquire targets. The view of the target from the ground is much different than it is from 20,000 feet. Describing the target using a common is critical for success and requires practice by both parties. Airspace restrictions often limited the ability of pilots to expend live or even practice munitions during CAS sorties.

The third finding in the GAO report was the services do not have the same training standards and certification requirements for the individuals coordinating CAS (GAO, 2003). What that means is there is potential to have no common language or understanding between those on the ground requesting and those in the air providing CAS. This has the potential to cause a dangerous and frustrating training environment. According to retired Rear Admiral Lewis, during OIF, when Navy and Marine pilots were tasked to support Army units things did go as efficiently as they do when they work with Marine ground forces (Erwin, 2003). Erwin (2003) quoted a Navy pilot who worked with Army forces in OIF as saying, "In Iraq, we weren't sure if the FAC knew our procedures. It was almost became a waste of time."

In order to overcome these limitations in current training, the Army and the Air Force must make a commitment to full scale joint training. Since both services already have to large-scale exercises to train its forces, they should look to combining Red Flags and NTC exercises. Combining these two exercises should be the goal of not only the Army and Air Force but of all the services. The vital training received by the forces participating in such a large-scale employment exercise would be second only to actual combat. When the services go to war, they must fight jointly under the combatant commander, why not make them train the way they will fight?

The Joint Forces Command (JFCOM) is currently in the process of developing what it calls the Joint National Training Capability (JNTC). JFCOM's objective is to enhance joint training

by tying together a number of participants over a geographically separated area, though the use of live participation, virtual simulation, and constructive simulation. In January 2004, JFCOM sponsored the Western Range Horizontal Event that combined a brigade rotation at the NTC, the Air Forces Air Warrior at Nellis, Marines at Twenty Nine Palms, and a Navy missile exercise near San Diego (Kennedy, 2004). Joint exercises also took place at Fort Polk's Joint Readiness and Training Center (JRTC), a smaller version of NTC in Louisiana, with the Air Force's Air Warrior II. As seen in figure 4, JFCOM has two JRTC/Air Warrior II exercises and one NTC/Air Warrior scheduled for FY05. The limitation of these exercises is numbers. Typically, an Air Warrior has only a squadron or two of fighter aircraft to support ground forces. The Joint Red Flag conducted in April 2005 had 161 aircraft with 34 squadrons from five countries participating.

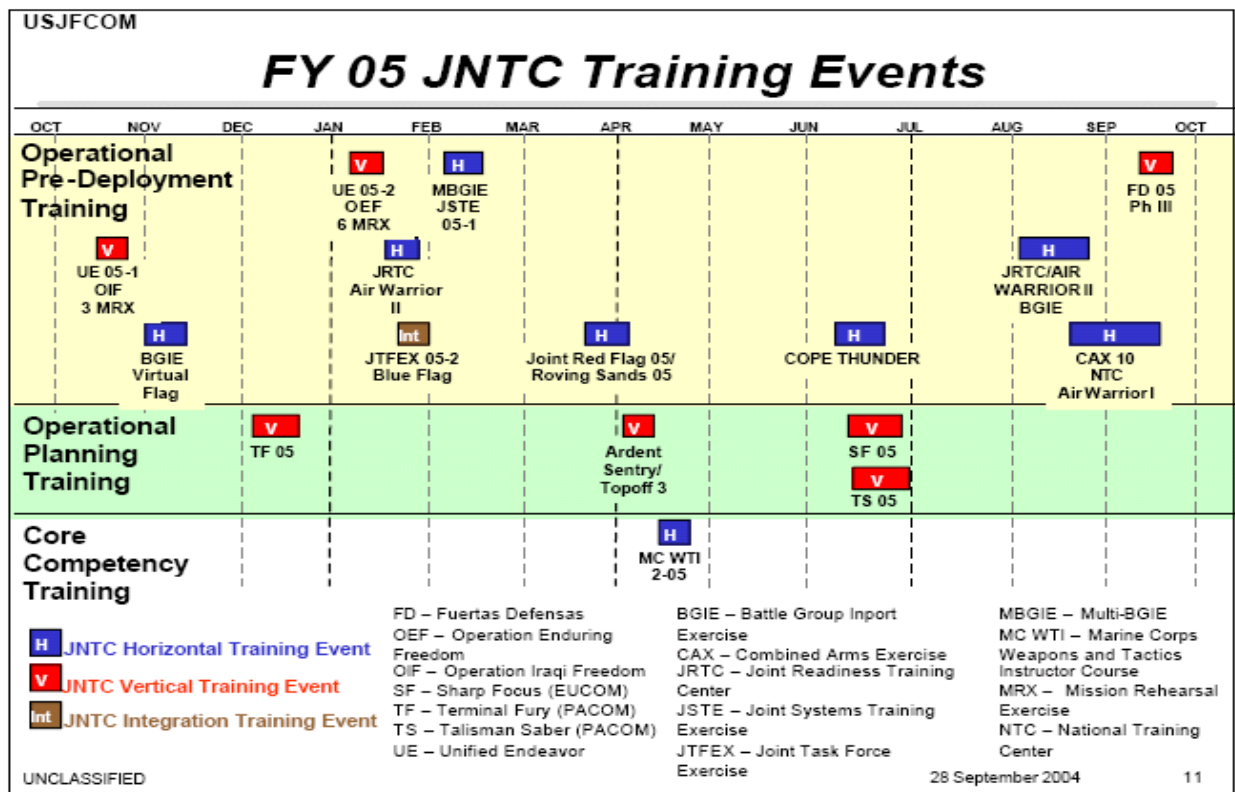


Figure 4 JFCOM JNTC Schedule for FY 05 (JFCOM JWC)

Support of the UA concept

The third area is the Army's reorganization into brigade UA. These UA are intended to be more capable of deploying due to a more independent command structure and a combining of capabilities into a single UA. Each new UA will be an armor, infantry, or airborne brigade, each with a common core of capabilities (U.S. Army, 2004). The idea is to be able to deploy a unit that has most of its combat and support companies internal to the unit. In the past, a single brigade was not capable of deploying with additional support units being added to provide support. If a brigade were to deploy separate from the division it would require adding other units from division level to operate once deployed. The reorganization has placed former division level units into brigade and made them more self-sufficient (Reference figure 5). Now only units like a helicopter aviation detachment need to be added to the UA if required (Feickert, 2005). The concept sounds much like a Marine Corp expeditionary unit. A Marine expeditionary unit (MEU) is a battalion size unit that deploys with support from a support element, a command element and an aviation element. The aviation element normally consists of six AV-8 Harriers to provide CAS and various support helicopters (Pike, 2005).

The Army UA aviation detachment however, consist of only helicopters, there are no fixed wing aircraft to provide CAS. The UA lacks the powerful punch provided by fixed wing assets. Fixed wing aircraft will only accompany a deployed Army UA to a joint operating area (JOA) if the Air Force is tasked by the Department of Defense to send aircraft with the UA. The Marine Expeditionary Unit commander has aircraft embedded within the task force and uses them to support his ground forces (Pike, 2005). The UA commander has no control over fixed wing aircraft and can only request support, if there are aircraft deployed in the JOA. With this arrangement, the Army runs the risk of repeating Somalia or Anaconda.

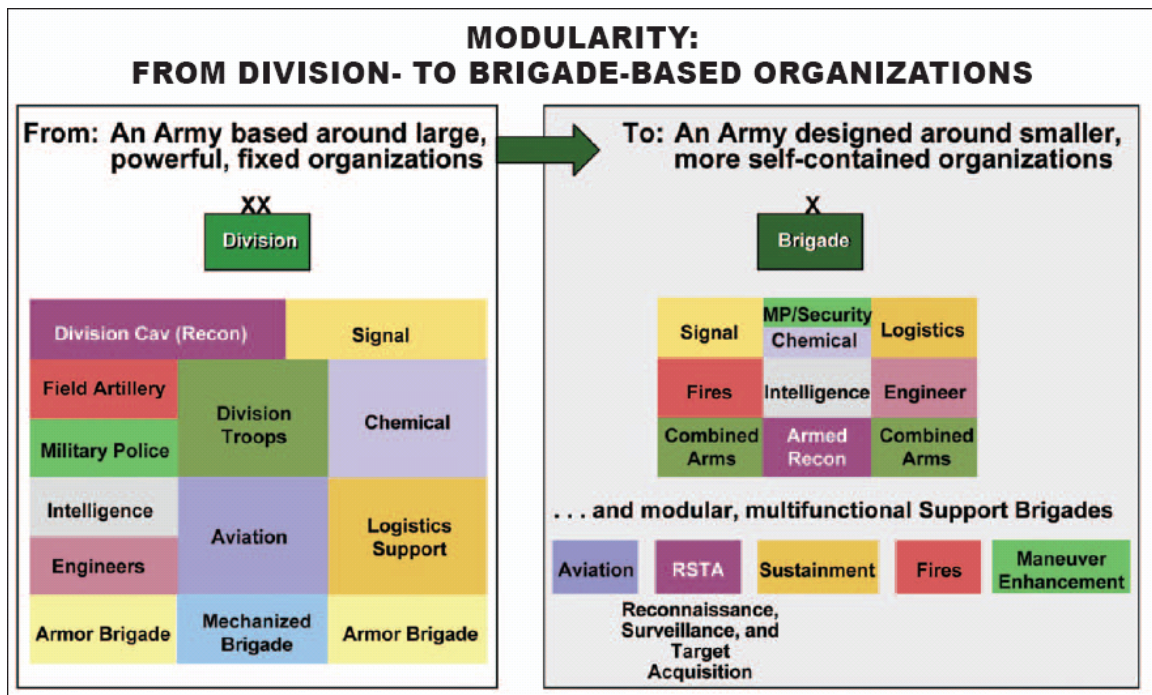


Figure 5 Army Brigade UA organization (US Army, 2004)

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

In this time of transformation, the U.S. military faces many uncertainties. Its current enemies are elusive and a near peer competitor is non-existent. Troop strength is in the process of drawing down overseas and a new round of bases closures is changing the landscape at home. One certainty for the military however, is it will continue to deploy expeditionary forces to regions around the globe to support U.S. national interests. Those forces are likely to be light, rapidly deploying forces, like the Army's UA or Marine MEUs. Likely to be without heavy organic fire support and outnumbered by threats, these forces will rely increasingly on the superior fire support provided by the joint forces of the combatant commander. A large part of that support is the ability for those ground forces to call in close air support when needed. Fixed wing aircraft from all services must be capable of providing persistent and reliable CAS to any deployed force.

The Air Force, in particular, has a varied history of providing persistent and reliable CAS to the ground forces. The Air Force has often had its attention turned towards strategic goals, such as preparing for nuclear war during the Cold War, while other tactical goals, such as providing effective CAS to the Army, have atrophied. The trend for the Air Force has been to develop multi-purpose fighter aircraft between wars only to find it to be unprepared to adequately provide CAS during a conflict. Korea and Vietnam were examples of that trend. The development of the A-10 is the exception to that but only because the Air Force was threatened by the Army's creation of attack helicopter to fill the void. Since the end of the Cold War the U.S. military end strength has decreased while its deployments have increased. This increase in deployments is

forcing the Army to become lighter and more deployable. The lighter Army forces will depend upon joint capabilities to provide a greater amount of support. The Army's increased reliance on the joint force to provide fire support in the future will require the Air Force to be more prepared than ever to provide CAS. In order for the Air Force to be prepared to provide the CAS, it must make a few changes.

Recommendations

The first recommendation for change is the Air Force must make CAS a higher priority. Air superiority will always be the number one job for the Air Force. The issue is how much air to air training do pilots require when future combat will likely have less and less of a credible threat from enemy aircraft. New technology will make the job of providing CAS easier but training focused on supporting ground forces must increase. The mission is too critical and the cost for mistakes made in combat are too great.

The second recommendation is for the Army and the Air Force to make greater efforts to include CAS into its large force exercises. Combining Red Flag and NTC exercises would give the air planners a chance to integrate into the ground commander's scheme of maneuver. It would also give ground commanders a chance to integrate airpower effectively into the plan. This training would also educate officers on the strengths and weakness of CAS to avoid another Anaconda like planning failure. Combining joint forces of this size would also give combatant commands a chance to provide a joint task force (JTF) commander to the exercise. This would give the commands the ability to give future JTF commanders an education in joint operations.

The third recommendation is to include a detachment of Air Force fighter aircraft in an Army UA when it deploys. Like Marine aviation combat elements, this detachment's first priority

should be to provide CAS for the ground forces. The units should be able to plug into the UA much like an Army aviation unit would prior to deployment. The aircraft would ideally be A-10s but any aircraft capable of executing the necessary CAS mission could fill the position. Each UA would not need an entire squadron of aircraft attached when it deploys. The Marines use six Harriers for a battalion of infantry and the Army's infantry UA consists of two battalions of infantry. Using the same ratio, 12 fighters would be enough to support the UA, assuming the Marines ratio is sufficient. Ideally the UA and squadron detachment would be paired together and maintain the same training cycles. This would provide each the ability to train together on a regular basis and especially during any large-scale employment exercises like Red Flag or NTC. When a single UA deploys in response to a crisis, the squadron would deploy to the area of operation with them, similar to a MEU and its aviation support.

A fourth recommendation is, failing to implement the previous recommendations, that the CAS mission should belong to one service. In 1995, the Air Force retired its electronic jamming EF-111 aircraft and the jamming mission became the responsibility of the Navy with the EA-6B Prowler (Pike, 2005). The Navy added 5 squadrons of EA-6B Prowlers and became the joint provider for electronic jamming (Pike, 2005). The Navy provides EA-6B to every Air Force air expeditionary force. This recommendation is not much different than was done with the jamming mission. Giving all CAS assets to one service allows that service to focus on the mission. It would most likely result in a greater standardization in training for both air and ground forces by eliminating at least one service from the process. Consolidating assets would also likely save the Department of Defense resources. The Marine Corps is a good choice to be the sole CAS provider for a couple of reasons. The Marine Corps dedicates its fighter aircraft to providing CAS for their ground troops therefore there will not be a question of priority. They

also have an infrastructure to include airbases, logistics, and training to absorb more fixed wing aircraft.

In the nearly 20 years since the Goldwater-Nichols Act of 1986, the United States Military continues to transform into the joint force envisioned by the creators of this legislation. The military forces of the United States will only become truly joint when interdependence is achieved. The ability of our ground forces to protect the vital national interests of the United States is inextricably linked to their ability to rely on joint, interdependent close air support. The Air Force must recognize this challenge and ensure the nation's ability to conduct future joint and expeditionary operations is not compromised by traditional service parochialisms. Close air support must be accepted as a primary role of the Air Force, worthy of the same respect garnished by the traditional roles of Air Power.

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ACRONYMS

AEF	Air Expeditionary Force
ALO	Air Liaison Officer
ASOC	Air Support Operations Center
ASOG	Air Support Operations Group
ATO	Air Tasking Order
CAS	Close Air Support
CAOC	Combined Air Operations Center
CFACC	Combined Force Air Component Commander
CFLCC	Combined Forces Land Component Commander
CJTF	Combined Joint Task Force
DoD	Department of Defense
EBO	Effects Based Operations
GAO	Government Accounting Office
GFAC	Ground Forward Air Observer
GSTF	Global Strike Task Force
JAWS	Joint Advanced Warfighting School
JDAM	Joint Direct Attack Munition
JOA	Joint Operating Area
JOSA	Joint Special Operations Area
JTF	Joint Task Force
MEU	Marine Expeditionary Unit
MOOTW	Military Operations Other Than War
NCW	Network Centric Warfare
NTC	National Training Center
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
ONA	Operation Net Assessment
OPORD	Operations Order
PSAB	Prince Sultan Air Base
SOF	Special Operation Forces
TACP	Tactical Air Control Party
UA	Unit of Action
UN	United Nations
UNITAF	United Task Force
UNOSOM	United Nations Operations Somalia

DEFINITIONS

air interdiction — Air operations conducted to destroy, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces at such distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required. (JP 1-02)

air superiority — That degree of dominance in the air battle of one force over another that permits the conduct of operations by the former and its related land, sea, and air forces at a given time and place without prohibitive interference by the opposing force. (JP 1-02)

air tasking order — A method used to task and disseminate to components, subordinate units, and command and control agencies projected sorties, capabilities and/or forces to targets and specific missions. Normally provides specific instructions to include call signs, targets, controlling agencies, etc., as well as general instructions. Also called **ATO**. (JP 1-02)

close air support — Air action by fixed- and rotary-wing aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces. Also called **CAS**. (JP 1-02)

joint fires — Fires produced during the employment of forces from two or more components in coordinated action toward a common objective. (JP 1-02)

joint operations area — An area of land, sea, and airspace, defined by a geographic combatant commander or subordinate unified commander, in which a joint force commander (normally a joint task force commander) conducts military operations to accomplish a specific mission. Joint operations areas are particularly useful when operations are limited in scope and geographic area or when operations are to be conducted on the boundaries between theaters. Also called **JOA**. (JP 1-02)

tactical air control party — A subordinate operational component of a tactical air control system designed to provide air liaison to land forces and for the control of aircraft. Also called **TACP**. (JP 1-02)

Effects Based Operations (EBO) - A process for obtaining a desired strategic outcome or "effect" on the enemy, through the synergistic, multiplicative, and cumulative application of the full range of military and nonmilitary capabilities at the tactical, operational, and strategic levels. (JFCOM Web Glossary)

Integrated Air Defense System (IADS) - A network of grouped sensors and air defense equipment that are interconnected via centralized command and control centers. Each group of sensors and equipment is responsible for its own area of airspace. They report their findings to a centralized command and control (C2) center which in turn will report the data and issue commands to the reporting group all other air defense groups which need to know, in order to defend efficiently and effectively a nations aerospace.